

Briefing Memo  
December 2, 2011  
(Revised February 9, 2012)

City of Oakland City Wastewater Treatment Plant  
located at Highway 64 East  
Oakland City, Indiana  
Gibson County

<u>Outfall Location</u>	Latitude:	38° 20' 21" N
	Longitude:	87° 20' 20" W

NPDES Permit No. IN0021687

**Background**

This is the modification of the NPDES permit for the City of Oakland City Wastewater Treatment Plant. The facility's current permit was effective on March 1, 2010 and has an expiration date of February 28, 2015. A request for permit modification was received from the permittee on November 7, 2011. The permit modification reflects an upgrade to the treatment facility resulting in an increase to the design flow of the treatment facility from 0.55 MGD to 1.0 MGD, with a peak design flow of 3.0 MGD, and the replacement of chlorination with ultraviolet light disinfection as the method of disinfection. The permit modification includes Discharge Limitation Tables reflecting both the interim requirements based on the current design flow of 0.55 MGD (Part I.A.1) and final requirements reflecting the new design flow of 1.0 MGD (Part I.B.1).

The Final Table in Part I.B.1 reflects an increase in the mass limitations for CBOD<sub>5</sub>, (from 91.7 lbs/day to 166.9 lbs/day as a monthly average, and from 137.6 lbs/day to 250.4 lbs/day as a weekly average during the summer monitoring period, and from 114.7 lbs/day to 208.6 lbs/day as a monthly average, and from 183.5 lbs/day to 333.8 lbs/day as a weekly average during the winter monitoring period); for TSS (from 110.1 lbs/day to 200.3 lbs/day as a monthly average, and from 165.1 lbs/day to 300.4 lbs/day as a weekly average during the summer monitoring period, and from 137.6 lbs/day to 250.4 lbs/day as a monthly average, and from 206.4 lbs/day to 375.5 lbs/day as a weekly average during the winter monitoring period); and ammonia-nitrogen (from 5.6 lbs/day to 10.1 lbs/day as a monthly average, and from 8.3 lbs/day to 15.2 lbs/day as a weekly average during the summer monitoring period, and from 8.5 lbs/day to 15.4 lbs/day as a monthly average, and from 12.7 lbs/day to 23.2 lbs/day as a weekly average during the winter monitoring period). The increase in mass limits reflects the increase in design flow and is not considered backsliding as the treatment facility upgrade meets the antibacksliding exception of 327 IAC 5-2-10(11)(b)(i) as a material and substantial alteration or addition to the permitted facility.

The treatment facility upgrade will also result in the replacement of chlorination with ultraviolet light as the method of disinfection. As the ultraviolet light disinfection system is expected to be operational by the start of the 2012 disinfection season (April 1<sup>st</sup>), the monitoring requirements, effluent limitations, and associated footnotes for total residual chlorine have been removed from both the Interim and Final Tables of the permit. The reopening clause addressing a case-specific MDL in Part I.E.4 has been removed from the permit as the permit no longer includes effluent limitations for total residual chlorine.

A notification requirement has been added to Part I.D of permit modification, requiring the permittee to provide written notice of the expected completion date of construction activities at least 30 days prior to completion. A footnote referring to the notification requirement has been added to both interim and final Discharge Limitations Tables. As a result, all footnotes associated with the Discharge Limitations Tables have been renumbered. Based on the permitted facility's design population equivalent (5,596 per Construction Permit No. 19860), the WWTP remains a Class II WWTP in accordance with 327 IAC 5-22-4. As a result, the monitoring frequencies for all parameters as well as the number of grab samples required per composite sample remain unchanged in the permit modification.

As a result of the addition of the Final Effluent Limitations and Monitoring Requirements, and Notification Requirement Sections, the lettering of the Monitoring and Reporting, and Reopening Clause Sections has been revised accordingly.

### **Modification**

The following changes have been made for the modification of the NPDES permit:

Page 1 of 28	This page has been modified to reflect the modification effective date for the permit.
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Page 2 of 28 through in Page 5a of 28	These pages have been modified to address the upgraded treatment system in the Treatment Facility Description, and to include interim and final Discharge Limitations Tables reflecting mass limits for CBOD <sub>5</sub> , TSS and ammonia-nitrogen based on both the current design flow (Table 1, Part I.A.1) and the increased design flow (Table 3, Part I.B.1). Additionally, the monitoring requirements, effluent limitations and associated footnotes for total residual chlorine have been removed from the Tables. Finally, a monthly monitoring requirement for phosphorus has been included in Table 1.
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Page 10 of 28	This page has been modified to include a notification requirement requiring written notice of the expected completion date of construction activities at least 30 days prior to completion as Part I.D of the permit.
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Additionally, the reopening clause addressing a case-specific MDL has been removed from the permit as the permit no longer includes effluent limitations for total residual chlorine.

#### **Expiration Date**

The expiration date of the permit has not changed. The permit, as modified, will expire at midnight on February 28, 2015.

Drafted by: Bill Stenner  
December 2, 2011

#### **POST PUBLIC NOTICE ADDENDUM: February 2, 2012**

The draft NPDES permit renewal for the City of Oakland City Wastewater Treatment Plant was made available for public comment from December 23, 2011 through January 23, 2012 as part of Public Notice No. 2011-12F-RD. During this comment period, a comment letter dated January 23, 2012, from the Environmental Law & Policy Center (ELPC), was received. The comments submitted by the ELPC, and this Office's corresponding responses are summarized below. Any changes to the permit and/or fact sheet are so noted below.

Comment 1: The load limits represent a significant increase from those approved in the previous permit. This increase in pollutant loading triggers the need for an anti-degradation analysis under 327 IAC 2-1-2 to prove that the increase in loading (lbs/day) is justified. The anti-degradation rule requires that "All waters whose existing quality exceeds the standards established herein . . . shall be maintained in their present high quality unless and until it is affirmatively demonstrated to the commissioner that limited degradation of such waters is justifiable on the basis of necessary economic or social factors and will not interfere with or become injurious to any beneficial uses made of, or presently possible, in such waters." Before this permit may be issued, the permittee must demonstrate the necessity of increased pollutant loading of CBOD, TSS, and ammonia-nitrogen contained in the discharge. The question a proper anti-degradation analysis seeks to answer is not whether the project is justifiable, but rather whether the water quality degradation is justifiable when weighed against alternatives that would degrade the water less or not degrade it at all.

Response 1: The policy of nondegradation of 327 IAC 2-1-2(2), applicable to all surface waters of the state (except waters of the state within the Great Lakes System), states that: "All waters whose existing quality exceeds the standards established herein as of February 17, 1977, shall be maintained in their present high quality unless and until it is affirmatively demonstrated to the commissioner that limited degradation

of such waters is justifiable on the basis of necessary economic or social factors and will not interfere with or become injurious to any beneficial uses made of, or presently possible, in such waters. In making a final determination under this subdivision, the commissioner shall give appropriate consideration to public participation and intergovernmental coordination."

327 IAC 2-1-2 does not include specific implementation procedures addressing the referenced policy of nondegradation. However, there are well recognized and fundamental issues that need to be evaluated when implementing the nondegradation policy. A fundamental component of an implementation procedure for a policy of nondegradation is a determination as to whether the actions that create a new or increased loading will result in a reduction in the water quality of the receiving stream downstream of the discharge. Any such action represents the trigger that would necessitate the demonstration referenced in 327 IAC 2-1-2. This trigger is referred to as a lowering of water quality, which occurs when there is a new or increased permit limit for a substance resulting in a calculated increase in the ambient concentration of that substance outside of the designated mixing zone.

While the draft permit modification for the Oakland City WWTP proposes to increase the mass effluent limitations for CBOD<sub>5</sub>, TSS and ammonia-nitrogen, the concentration effluent limitations for these parameters remain unchanged. The Q<sub>7,10</sub> low flow value for Shy Ditch (the receiving stream for the permitted discharge) is 0 cfs. Therefore, the increase in mass effluent limitations, coupled with the corresponding increase in discharge flow, will result in no increase in the calculated downstream (ambient) concentration of CBOD<sub>5</sub>, TSS and ammonia-nitrogen in Shy Ditch. Since the increase in mass effluent limitations for CBOD<sub>5</sub>, TSS and ammonia-nitrogen does not meet the above-noted criteria (a calculated increase in the ambient concentration outside of the designated mixing zone), the increase does not constitute a lowering of water quality. As a result, IDEM has determined that the demonstration referenced in 327 IAC 2-1-2 is not required for CBOD<sub>5</sub>, TSS and ammonia-nitrogen.

Comment 2: Neither the current permit nor the proposed amendments include information about phosphorus effluent limits and/or monitoring or an explanation for why phosphorus effluent limits and/or monitoring are unnecessary. Phosphorus pollution can cause algae blooms, low dissolved oxygen, and growth of toxic cyanobacteria. The aesthetic effects of smelly "green gunk" and the dangers of toxic cyanobacteria can preclude recreational uses of the affected waters, and low dissolved oxygen can render an area virtually uninhabitable for aquatic life. Indeed, several of the surrounding bodies of water appear to have algae bloom problems, as evidenced by slicks of green on the waters' surfaces.

loadings of nutrients will cause, have the potential to cause, or contribute to violations of the state's narrative standard. 40 CFR 122.44(d). Where an affirmative determination is made, IDEM must set applicable phosphorus effluent limits in its NPDES permits. If IDEM has not performed reasonable potential analyses on this discharge, it must do so now and include permit limits in accordance with its findings. Section 40 CFR 122.44(d) allows the state to calculate limits based on proposed state criteria or on a state's policy interpreting its narrative standard. Thus, before IDEM issues the final permit for this facility, IDEM must conduct a proper reasonable potential analysis and calculate protective limits for phosphorus.

Response 2: Per IDEM's agreement with the U.S.EPA, all NPDES permits classified as majors (design flow greater or equal to 1.0 MGD) are required to monitor for phosphorus on a monthly basis. Upon completion of the facility upgrade, the City of Oakland City Wastewater Treatment Plant will be classified as a major facility. The omission of the requirement from the initial draft permit was in error. A monthly monitoring requirement for phosphorus has been added to the permit modification.

Drafted by: Bill Stenner  
February 9, 2012



STATE OF INDIANA  
DEPARTMENT OF ENVIRONMENTAL MANAGEMENT

PUBLIC NOTICE NO: 2012 - 3A - F

DATE OF NOTICE: MARCH 5, 2012

The Office of Water Quality issues the following NPDES FINAL PERMIT.

MAJOR - MODIFICATION

OAKLAND CITY (city) WWTP, Permit No. IN0021687, GIBSON COUNTY, HWY 64 E, Oakland City, IN.  
This municipal permit modification reflects the treatment system upgrade. Permit Manager: Bill Stenner, 317/233-1449, [bstenner@idem.in.gov](mailto:bstenner@idem.in.gov).

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**APPEAL PROCEDURES FOR FINAL PERMITS**

The Final Permits are available for review & copies at IDEM, Indiana Government Center, North Bldg, 100 N Senate Ave, Indianapolis, IN, Rm 1203, Office of Water Quality/NPDES Permit Section, from 9 - 4, M - F (copies 10¢ per page). Each Final Permit is available at the respective, local County Health Department. **Please tell others you think would be interested in this matter.** Regarding your rights and responsibilities pertaining to the Public Notice process and timeframes, please refer to IDEM websites: <http://www.in.gov/idem/5474.htm> and IDEM Permit Guide (Public Participation): <http://www.in.gov/idem/4172.htm>. To view the Citizen Guide go to: <http://www.in.gov/idem/5803.htm>.

**Appeal Procedure:** Any person affected by the issuance of the Final Permit may appeal by filing a Petition for Administrative Review with the Office of Environmental Adjudication within eighteen (18) days of the date of this Public Notice. Any appeal request must be filed in accordance with IC 4-21.5-3-7 and must include facts demonstrating that the party requesting appeal is the applicant; a person aggrieved or adversely affected or is otherwise entitled to review by law.

**Timely filing:** The Petition for Administrative Review must be received by the Office of Environmental Adjudication (OEA) within 18 days of the date of this Public Notice; either by U.S. Mail postmark or by private carrier with dated receipt. This Petition for Administrative Review represents a request for an Adjudicatory Hearing, therefore must:

- state the name and address of the person making the request;
- identify the interest of the person making the request;
- identify any persons represented by the person making the request;
- state specifically the reasons for the request;
- state specifically the issues proposed for consideration at the hearing;
- identify the Final Permit Rule terms and conditions which, in the judgment of the person making the request, would be appropriate to satisfy the requirements of the law governing this NPDES Permit rule.

If the person filing the Petition for Administrative Review desires any part of the NPDES Final Permit Rule to be stayed pending the outcome of the appeal, a Petition for Stay must be included in the appeal request, identifying those parts to be stayed. Both Petitions shall be mailed or delivered to the address here:  
**Phone: 317/232-8591.**

Environmental Law Judge  
Office of Environmental Adjudication  
IGC - North Building- Rm 501  
100 N. Senate Avenue  
Indianapolis IN 46204

**Stay Time frame:** If the Petition (s) is filed within eighteen (18) days of the mailing of this Public Notice, the effective date of any part of the permit, within the scope of the Petition for Stay is suspended for fifteen (15) days. The Permit will become effective again upon expiration of the fifteen (15) days, unless or until an Environmental Law Judge stays the permit action in whole or in part.

**Hearing Notification:** Pursuant to Indiana Code, when a written request is submitted, the OEA will provide the petitioner or any person wanting notification, with the Notice of pre-hearing conferences, preliminary hearings, hearing stays or orders disposing of the Petition for Administrative Review. Petition for Administrative Review must be filed in compliance with the procedures and time frames outlined above. Procedural or scheduling questions should be directed to the OEA at the phone listed above.